9/11/26 Morning Report with @CPSolvers

"One life, so many dreams" ***Case Presenter***: *Adam(@)* ***Case Discussants***: *Rabih(@) & Lourenco(@)*

https://clinicalproblemsolving.com/present-a-case/

Scribing (Lukas):

CC: female mid 70s p/w 3 weeks hx of **left sided otalgia associated** with *hearing loss*, *tinnitus*, *nasal crusting* and *nasal congestion*

HPI: initially treated in community with oral antibiotics and topical ear drops presumed for URT infection with otitis media. No improvement. Acute deterioration with 4 days of marked lethargy, malaise, headache, dizziness and several episodes of collapse at home without LOC.

PMH:
-Mild asthma
-resolved psoriasis

Meds:
Low dose ICS/LABA combined inhaler

Fam Hx:

Social Hx:
No prior hospital admission
Lives independently
Previously healthy

Health-Related Behaviors:
Non smoker

Allergies:
none

Vitals: T: 38,8°C **HR**: 110 **BP**: 118/81 **RR**: 17 **Sat**: 98 on RA **BMI**:
Exam: Gen: fully oriented, appeared unwell and in discomfort
HEENT: otoscopy erythematous left tympanic membrane
CV: wnl **Pulm**: wnl **Abd**: wnl **Neuro**: wnl **Extremities/skin**: wnl

Hematology:
WBC: 24,8 (21,4 neutrophils) Hgb: 13,2 Plt: 1056 MCV:

Chemistry:
Na:135 K: 4,8 Cr: 0,53 eGFR: 89 ALT: 184 ALP: 285 T. protein: 9 Alb: 3,3 CRP: 309

Flexible nasoendoscopy: Markedly swollen and erythematous nasal mucosa
CT: partial opacification of the left mastoid in keeping with acute otomastoiditis

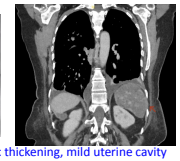
Course: *received i.v. ceftriaxone and metronidazole, admitted to otolaryngology → working diagnosis: complicated otitis media with early sepsis*

EKG: sinustachycardia with LBBB

hsTroponin: 3258 (asymptomatic), NT-proBNP 18k BC, UA, viral panel, swap: *all negative*
→ Cardiology consult: probable type II MI

CXR: bilateral PLE and opacifications, mild cardiomegaly





TTE: LVEF 35-40% mild concentric hypertrophy, mild MI, small pericardial effusion

***Day 3* of admission: Autoimmune-panel**: pr3 anca 213.1; hsT: 1888

MRI head: inflammatory changes involving left middle ear and mastoid
Without intracranial extension or encephalitis

Infectious screening: neg for EBV, CMV, VZV, HIV, HBV, HCV, fungals, TB

UA: no hematuria, no pyuria, glucosuria, nitrates
CT T/A/P: multiple bilateral pulmonary nodules. Hypodense splenic lesions, small pericardial effusion, pyloric thickening, mild uterine cavity distension.

Tumor markers: CA 125: 137; CA 199: 168

Cardiology consult: suspected autoimmune myocarditis → started on bisoprolol and ramipril

***Day 14* PET-CT**: suspicious for primary lung malignancy with metastatic disease and splenic uptake. No significant uptake within pylorus or uterus

Rheumatology consult: pulse steroids given

BAL cytology and cultures: wnl

EBUS + histology: scanty benign lymphoid tissue, no granulomas. No malignant cells

Labs: WBC: 14,4 (neutrophils 13), PLT: 864; CRP < 5, ALT: 24 ALP: 110

Course outpatient: *markedly improvement* of previously pulmonary nodules under prednisolone and rituximab; CT showed marked reduction in spleen size with evidence of small infarcts. Vaccination against encapsulated organism was recommended. Cardiac MRI showed no active myocarditis. Scarring or impaired systolic function

Dx: PR3-ANCA positive GPA (probable assoc. myocarditis) mimicking disseminated malignancy

Problem Representation: 70isch yo female p/w subacute left sided otalgia with signs of systemic inflammation and troponemia and PET positive pulmonary nodules turns out to be GPA mimicking malignancy

Teaching Points (Preethi)

Approach to Otalgia: localisation is important: ear canal, middle and inner ear. Think about the coexisting pharyngeal or nasal issues.

Brain symptoms approach:
- Inhaled corticosteroids can have similar immunosuppressive effect as oral steroids.
- Dizziness, headache, lethargy → think about spread from the ear to the brain penetrating the meninges.
- Fever + elevated white count – focal vs multifocal vs systemic processes?

Approach to abnormal labs:
- Protein gap (Total protein - Albumin > 4) -> does not happen acutely. Is it a sign of immunosuppression?
- Thrombocytosis: unlikely to happen with a simple local infection. Think about invasive infection (for example osteomyelitis 2/2 cellulitis) Severe atypical infections: mycobacteria, invasive fungi, intracellular organisms, malignancies, autoimmune

Myocardial injury:
- Think about MINOCA - Myocardial infarction with non-obstructive coronary artery disease in women with signs of myocardial injury.
- CXR showing cardiomegaly + severely elevated troponin: myocarditis is in the differential
- Infective Endocarditis caused by some bacteria like coxiella, brucella can cause PR3 ANCA positivity which can mimic vasculitis.

Anca-associated vasculitis (AAV):
- Findings of CXR: space occupying process in the lungs like opacities, nodules, pleural effusion. Tissue loss can also look as a space occupying lesion on a CXR- cavitary lung lesion
- For GPA: usually kidneys are involved, presence of hemoptysis when involved with lungs. But….Glomerular injury can happen with normal creatinine. UA will be helpful.
- GPA: Lung processes (cavitations) + nasal signs even without overt kidney injury. (EGPA can happen without kidney involvement). Vasculitis can happen as a paraneoplastic process 2/2 malignancy.
- High troponin shows extensive end organ damage - Autoimmune emergency. Think about start empiric steroids to save! (Pyogenic bacterial infections is the absolute contraindication for pulse dose steroids)

Approach to multiple lesions:
- Silent lesions → more likely to be a solid cancer
- Non silent lesions like our patient with multiple symptoms and inflammation → less likely to be a solid cancer, can be liquid cancer (leukemia, lymphoma), can be infection. (Spleen is "allergic" to solid tumors)

